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ABSTRACT

Further education (FE) colleges in England are facing a reduced level of support from local and central government and an increased level of competition for customers. At the same time, the demographic trends mean a reduction in numbers in the age group that, traditionally, has provided the most full-time and part-time FE students. FE colleges will, therefore, have to find new clients, particularly in the field of updating and retraining for industry. This document is an attempt to provide assistance to colleges in the development and implementation of a college-wide policy for effectively ascertaining and meeting the changing needs of employers. It includes: (1) discussions on, and guidance relating to, the development of a college policy for determining the needs of employers; (2) guidance on the techniques that can be used to ascertain the needs of employers; and (3) examples of how some colleges have organized themselves to meet the needs of employers and the techniques used to determine such needs. The report contains checklists about developing policies for senior management and staff who must implement market research policies. A 21-item annotated bibliography is included. (KC)

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FOREWORD

Further education colleges are facing situations that are likely to be uncertain and unstable over the next few years. They will be facing a reduced level of support from local and central government and an increased level of competition for customers at a time when the demographic trends mean a reduction in numbers in the age group that, traditionally, has provided most full-time and part-time FE students.

FE colleges will therefore have to find new clients, particularly in the field of updating and retraining for industry. Many colleges are already well established in this area; indeed, in 1987/8 FEU carried out an evaluation of the Department of Trade and Industry (DTI) scheme for IT skills updating in FE colleges, in which the DTI part-funded the purchase of new technological equipment so that colleges could provide modern training for industry. One of the major aims of the scheme was to encourage closer education/industry links and define and meet the new technology skills training needs in participating industry. The evaluation exercise showed that while many colleges were satisfactorily meeting the needs of industry, in some cases a limited range of techniques was being used to identify training needs.

This document is an attempt to provide assistance to colleges in the development and implementation of a college-wide policy for effectively ascertaining and meeting the changing needs of employers. It includes checklists for:

- senior management — about developing policies;
- staff who have to implement market research policies.

The report also includes examples of the methods used by a range of colleges in the implementation of such policies. Three approaches, not mutually exclusive, are identified:

- college organisation (e.g. the value of a marketing unit);
- market research techniques;
- identification of training needs.

It is, perhaps, worth commenting that one useful approach is to seek to identify the problems faced by a company; in the light of these the college can offer a package of consultancy and training that can go towards solving those problems.

FEU wishes to place on record its appreciation of the work undertaken by members of the Project Working Party (see Appendix B) and, in particular, Bill Bolton who undertook the collation of the material and the basic presentation of the report.

Albert Clyde
Development Officer
Further Education Unit

INTRODUCTION

THE CHALLENGE

1. Changes in the structure and responsibilities of college management as a result of the new Education Reform Act and increasingly rapid changes in technology will mean that colleges must be responsive to the needs of local industry if they are to grow or even survive in the emerging competitive free market for further education (FE) services. A recent FEU evaluation of a DTI scheme on new technology (see paragraphs 4, 5 and 6) identified the necessity for a college policy for ascertaining industrial training needs and a planned approach to its implementation. These are in reality issues relating to the entire range of college services.

2. Ascertaining and responding to the needs of employers is seen as a vital part of further education. Colleges need to invest time, staff and money and ensure college-wide commitment. They should see this as a vital aspect of their planning. LEAs should require this of colleges in their strategic plans.

> *To survive in FE, senior management must implement a college-wide policy for effectively ascertaining and meeting the changing needs of employers.*

AIMS OF THIS REPORT

3. This report is aimed at:

   - college senior management concerned with the survival and growth of the college in the emerging 'free market' for college services to employers;
   - college staff who implement policies, including market research to ascertain the needs of employers;

   and includes:

   - discussions on and guidance relating to the development of a college policy for determining the needs of employers;
   - guidance on the techniques that can be used to ascertain the needs of employers;
   - examples of how some colleges have organised themselves to meet the needs of employers, and the techniques used to determine such needs.

BACKGROUND TO THE PROJECT

4. One aim of the DTI's 'Scheme for new technology skills updating in further education colleges' (1986/9) was to encourage closer college/industry links to enable new technology skills training needs to be both defined and met. An FEU evaluation of the scheme identified a number of problem areas with respect to this aim.

5. One of the major issues arising was the procedure for the identification of training needs in industry. In some colleges the needs were determined on the basis of staff perceptions of what was required, some of which resulted from discussions with companies rather than as a result of a detailed skills needs analysis

or special market survey. Table 1 gives a breakdown of the methods used by colleges (the total amounts to more than 100% because, often, more than one method was used).

Table 1 How a sample of 31 colleges determined the needs of employers

	Sample %
General perception of changes in technology	84
General discussions with local companies	72
Results of skill needs analysis by college staff	44
Requests from companies	36
Special market survey among local companies	28
Pressure from college advisory committee	16
Results of skill needs analysis by companies	8

6. A related issue that arose from the evaluation was that many colleges had not evolved policies on their approach to the growing new technology needs of companies, and responses to perceived needs had been almost *ad hoc*. Initiatives were often due to the interest of particular members of staff whose departure often resulted in the breakdown or stagnation of such initiatives.

PROJECT METHODOLOGY

7. Three main methods were used to prepare this report:

   - A literature search was carried out (the co-operation of the British Association for Commercial and Industrial Education (BACIE) is gratefully acknowledged).
   - Examples of practice were gathered from colleges.
   - A working group (see Appendix B) of college practitioners submitted papers describing the situation in their colleges, and deliberated on the material and issues involved.

COLLEGE-WIDE POLICY CHECKLIST

8. This checklist is intended for use by senior management in colleges, as a basis for discussing the policy required by the college in relation to employers' needs for training, retraining and other college services.

- Employers are one of the main categories of customer and a college-wide policy is required for their needs.
- Colleges should be aware of the current needs of employers.
- The immediate and future needs of employers must be ascertained before courses/programmes are mounted for them.
- A college-wide policy directed to serve the needs of employers requires the appropriate infrastructure and attitudes in the college.
- A high-profile college marketing unit responsible for co-ordinating the necessary background research and selling process is an effective way of implementing a policy directed at the needs of employers.
- Communication systems within the college should be able to provide potential customers with speedy, if not instant, replies to enquiries.
- The college financial and administrative systems need to facilitate quick responses to employers' needs.
- There must be a policy for the distribution of revenue generated and investment for the future generation of income.
- The college should identify and/or obtain dynamic staff who are, or would make, good salespersons, market researchers and course developers, and deliver courses tailored to meet the needs of employers.
- Staff development is needed to improve the attitudes, skills and knowledge of all staff.
- The college management system needs to allow quick responses to employer needs.

NEEDS INVESTIGATION CHECKLISTS

9. These checklists are directed at college staff who have to analyse the needs of industry for training, retraining or other college services. It indicates possible techniques.

SECONDARY MARKET RESEARCH

Secondary market research involves drawing upon information and data already collected and available (see paragraphs 17 and 18 for college examples). The following are some possible sources:

- College staff may already possess information about the industry, based on their experience and knowledge of the subject areas concerned.
- Student records could indicate growth changes in particular industries and students might be able to indicate changes occurring in their job tasks.

- Trade papers, professional journals, Training Agency publications, Labour Market Intelligence (LMI), Computer Assisted Local Labour Market Information (CALLMI) service, government statistics, newspapers and FEU publications can yield information concerning industrial and business trends.
- Personal business contacts, PICKUP Regional Development Agents, local newspapers, local chambers of commerce, local employer networks and a variety of local people might have information relevant to local industrial/business trends.
- Literature from training consultants or competitors for training work can also contribute.
- Economic development units and planning departments of local authorities are very useful sources.
- Literature from the EEC can assist in determining national and international trends.

Set up a mechanism within the college whereby secondary market research is gathered in and collated for immediate or future use (see paragraphs 15 and 17 for examples).

Implement a process of staff development to improve the quality of secondary market research and make use of good practice within the establishment.

PRIMARY MARKET RESEARCH

Primary market research (field research) is used to describe the gathering of first-hand and first-time information. It can be considered to have three basic functions: collection of information not already available, collection of data to augment or update existing information, and checking the market for a product (course/programme) already conceived or developed. Carry out primary research if, for example:

- an existing course is not attracting students;
- some companies or segments of local industry make little, if any, use of college facilities;
- existing provision might need changing;
- current provision has to be developed in order to augment or diversify;
- new companies have moved into the area;
- a particular market segment is not being reached.

Techniques

There are a variety of techniques for primary market research (see paragraphs 17 to 21 for college examples).

- *Questionnaires to a random or stratified section or the entire population in a general or targeted survey.* The questions can be open-ended, forced-choice or priority-ranking. They can reach a large number of people in a short time and are relatively inexpensive. However, good questionnaires are not easy to produce and require time and skill for their development. Questionnaires, however, have serious limitations: there is generally a low return rate, difficulty in use for in-depth analysis of problems or the evolution of solutions to issues.

- *Consultation with key people*. These might be company training managers or line managers, members of trade or professional associations, or trade union officers. The techniques used for gathering information might be structured or unstructured interviews, or possibly group discussions. Structured interviews, i.e. using essentially a questionnaire as the basis of the interview, are easier to analyse than unstructured ones, but require care and time in formulation. Group discussions or seminars enable people to interact with issues and evolve solutions. Consultations also establish and strengthen lines of communication. However, they carry a built-in bias since they depend on the views of just a few individuals and might be non-representative. Care must be exercised in selecting the people interviewed or involved in discussions.

  Primary market research is very labour intensive. Essential considerations will include:

  – *the people required;*
  – *the training needed;*
  – *the computer facilities needed.*

IDENTIFYING SPECIFIC SKILLS REQUIRED

The term 'identification of training needs' is used for the identification of competences required by individuals within a company, to take them from what they already can do to what they need to be able to do in order to meet the requirements of the company. These competences may already have been identified by the company. If, however, they require the college to carry out such an identification, it is important to realise that close co-operation with the company is required and skilled people are needed; it is not a task to be undertaken lightly. The techniques to be used require careful selection; the following are some possibilities:

- *Analysis of appropriate company records and reports*: turnover/accident records, balance sheets, audit and budget reports or evaluation studies. Such analysis can highlight trouble spots but will often not disclose the cause or possible solutions of a problem.
- *Consultation with key people*: senior management, training managers, line managers, supervisors or trainees. The techniques used for gathering information might be structured or unstructured interviews or group discussions which may be of the brainstorming type.
- *Observation of work contexts and processes*: structured or unstructured. Skilled observers are required and there may be problems if the observation is perceived as 'spying'.
- *Questionnaires/tests*: administered to a random, stratified, or full target group, whatever the level of generality or specificity of the objectives. The questions can be open-ended, forced-choice or priority-ranking. They are useful for gathering superficial/general information.

Paragraphs 21 and 22 give some examples of colleges.

The identification of training needs requires skilled staff with time and resources.

- *Have you such staff?*
- *Do they require training and staff development programmes?*

RESOURCES

Secondary market research, primary market research and the identification of training needs requires resources: staff, time and money. Where will these come from? Staff development is likely to be required since the staff involved will need:

- interviewing and interpersonal skills in relation to a wide variety of staff across organisations;
- the ability to handle and analyse business data;
- the ability to relate quickly to the business under research;
- the ability to talk in terms of business results and performance improvements;
- the ability to write concise and convincing 'business' proposals;
- the ability to consider and implement innovative and non-traditional solutions;
- presentation and selling skills;
- the ability to avoid presenting solutions to unidentified problems by just selling courses from a prospectus.

DELIVERY

Research can be pointless if the college cannot develop and deliver the products identified. It must be seen as part of the task of delivering what companies need. If necessary, other providers should be sub-contracted to meet the needs identified.

EVALUATION

Having researched, developed and delivered the goods, a final facet of the full cycle is further research to establish whether this was really what the customer wanted. There is also a need to feed information into future planning.

In considering the needs of employers, it is necessary to recognise that many of the skills required at work can cover a wider requirement than just, say, technological or technical skills. It can be an artificial constraint to restrict research to individual curriculum areas. The research needs to be open-ended enough to allow for wide-ranging forms of skill to be identified.

10. Paragraphs 11 to 24 aim to illustrate the points made by quoting examples of college practice. This section is divided into three main aspects (the numbers indicate the paragraphs where key points may be found):

College organisation

Business and industry centre	12
College advisory boards	14
Costing and pricing	12,15
External relations unit	11,13,16
Industry/commerce/college confederation	14
Information service	15
Limited company	14
Self-funding cost centre	12
Venture capital	13

Market research

Difficulties in carrying out market research	18
Discussions with key personnel	20,21
Establishing list of firms	15,17,18
Presentations	19
Seconded industrialist	19
Questionnaires	17,18,19

Identification of training needs

DACUM	24
Interviewing company staff	22,23
Questionnaires	22,23
Training audit	22
Working with training officers	22,23

COLLEGE ORGANISATION

11. To meet the challenges posed by a market-led policy for a college, an approach adopted by some colleges is to set up a college-wide section to be responsible for marketing and associated research. Thus, for example, Salford College of Technology created its External Relations Unit in 1985 with the remit to link formally with bodies outside the education services which had an influence on education, e.g. Training Agency, DTI, the EEC, and industrial training boards. The unit co-ordinates links with industry, commerce and the public sector (in particular the City of Salford Authority). It was set up with one member of staff and a clerical assistant, but now has a range of staff supported by an administration unit.

12. In some colleges the marketing function is linked with the delivery. Thus, for example, Blackburn College uses its Business and Industry Centre for most of its industrial liaison and to act as the administrative centre for all its short courses. The centre is run as a separate cost centre on a self-funding basis. It operates the pricing mechanism for short courses and takes a levy on all the work it commissions throughout the college. The centre has a team of four academic and two support staff.

13. Wakefield District College has established (March 1986) a unit within the college, Wakefield District College Training Services, with the specific job of informing companies of the wide-ranging human and technical training resources that the college can provide. The unit is the first point of contact for companies wanting to explore the possibility of training. It helps managers identify training needs and design training courses which can be delivered in house, in college, residentially or by open learning. For some companies the college also provides customer training. A recent development is a link with a venture capital company, Yorkshire Enterprise Ltd, which provides risk finance to small and medium-sized companies. Since the company believes that training is a factor in reducing the risk to their investments, they have links with the college to provide the required training. In effect, the venture capital company carries out much of the training needs research.

14. Before 1983/4, Walsall College of Technology had college advisory boards and individual contacts with companies by staff members, uncoordinated and on an *ad hoc* basis. Then the college instituted an operation called Turnkey, a loosely knit confederation of industrial and commercial firms, the college and LEA. The initial thrust of the operation was courses for the 'educated unemployed', these being funded by the European Social Fund. The courses contained 12 weeks' work experience and were designed to get the trainees jobs rather than a qualification. After the first period of work placement, industry soon realised the quality of the training/retraining courses. As more and more firms were used for work placements, so formal contact with companies increased. In addition to these courses, the college also offers 'hands-on' facilities to companies for the evaluation of equipment and processes. Small batch runs or 'one-offs' can be produced in the college. A database of firms has been established and is constantly being upgraded. The Turnkey operation is managed by a former engineer, with five members of staff with remitted hours. The college's policy in relation to industry is evolving and envisages advisory committees being discontinued in the immediate future. A new technology centre will be established, managed by a company limited by guarantee, with inputs from the college, LEA and industry. As part of this there will be:

    - increased attendance at national exhibitions;
    - the production of a video to market college facilities and expertise in conjunction with the Economic Development Unit of Walsall Metropolitan Borough;
    - increased visits to European industry and training centres in anticipation of the open market policy in 1992;
    - increased co-operation with manufacturers of new technology equipment for demonstration and evaluation;
    - an increase in activities looking outward to industry.

15. Calderdale College, formerly Percival Whitley College of Further Education, has set up the Calderdale Information Services (CALDIS). This is an industrial support agency run by the college librarian with an additional half-time member of staff,

and resources from the borough's Economic Development Unit. A quarterly magazine is circulated to 1800 member companies. CALDIS also holds conferences, seminars and short courses, normally but not exclusively run in the college. It maintains a database of Calderdale companies and produces a major products and services register every year. This is an industrial classification of all firms, including products, size of firm, senior staff and CALDIS contact. The steering committee of CALDIS includes a cross-section of local industrialists, with the college principal as chairman. The college also has a marketing unit: a principal lecturer heading a team of four staff, each having four hours' remission. The unit carries out industry liaison and research. All such visits and research are logged on a database. College policy now is that other members of staff should not make industrial visits or contacts without at least one hour's In-Service Education of Teachers (INSET) from a member of the marketing team. A college computer programme, SELFI, is used to provide a standard and fast short-course costing and pricing mechanism, quotes being given to companies either immediately or within two hours of returning from a company visit. The college has developed a high profile with the industrial/business community.

16. Each of the three constituent departments of the Faculty of Technology at Southampton Institute of Higher Education has been designing and developing short courses and consultancy services for many years, in conjunction with industry. Short courses, full cost, rose by 35% in 1987/8 and now represent 12% of the faculty's gross income. In addition, consultancy services have grown significantly in recent years. These frequently consist of arrangements where industry discounts equipment, sometimes backed by a DTI grant, in return for technical development. For relatively low capital outlay, this results in substantial gains in plant, although the staff commitment required is very high. To further strengthen its work with industry, the institute has employed, under a NAB (National Advisory Body for public sector higher education) initiative, a full-time marketing manager and PICKUP co-ordinator to work alongside the present part-time faculty marketing staff. Together with colleagues from other faculties, a short-course unit is being developed to give a single access contact point for those seeking information, and to co-ordinate all college-employer contacts. An important objective of the unit is to remain flexible enough to allow college-employer contacts at all levels.

    There can be great advantages in a college having a central unit to co-ordinate all aspects of the work involving industry and commerce.

MARKET RESEARCH

17. An example of market research is that undertaken in the East Lancashire districts of Hyndburn and Rossendale and reported in the FEU/PICKUP publication *Increasing College Responsiveness* (1986). A list of firms in the area was established from the commercial rating list, the Economic Intelligence Unit of Lancashire County Council and a directory of firms that had already been compiled by Accrington and Rossendale College. A

questionnaire was designed to obtain information in three main areas:

- factual information about the size and nature of the company and new technology systems already installed;
- information about company perceptions and attitudes, evaluation of existing training programmes, and estimates of future training requirements;
- company plans for the future development of operations and company perceptions about the impact of new technology upon staff.

Following piloting of the questionnaire with two companies, it was used as the basis of an interview schedule for visits to 400 companies and as a postal questionnaire for a further 400.

18. Willesden College of Technology carried out a local collaborative project (LCP), the main objective being to identify the training needs of local companies in computer-based technology and establish the resources required. The project, initially of one year's duration, employed six staff members, some part-time, together with part-time secretarial staff. It was subsequently extended for a further year to meet a specific training requirement identified during the first year. The main steps (see Appendix A for fuller details) in the procedure adopted by the college were:

    - compilation of a company directory using existing information from a variety of sources;
    - devising a questionnaire, with advice from a number of associations and colleges;
    - identifying 622 companies from the company directory and inviting them to participate;
    - visiting 163 of the companies approached (148 completed questionnaires);
    - staff participating in an in-college seminar on interview techniques before visiting the companies.

    The outcomes of this project included:

    - a computer database of local companies;
    - detailed information on current and planned use of computer technology by local industry;
    - information concerning consequential changes in skill requirements;
    - information concerning the implementation of computer-integrated manufacture;
    - the perceived future training requirements of local industry;
    - a database of other training providers;
    - an investigation into the extent, type and mode of future training to be provided by the college.

The major difficulties experienced during the project were:

- contacting the right person;
- reluctance, on the part of some companies, to accept college involvement;
- reluctance, on the part of some companies, to spend time on the questionnaire;
- the length and content of the questionnaire;
- the time required to arrange interviews;
- the inadequacy of the college communication system;
- the analysis of questionnaire results.

The college now has a programme of regular visits to companies on the database, using a shorter and more general interview schedule/questionnaire. A programme of visits to other companies has also been instituted. The database is updated weekly and special short courses are provided flexibly and on demand.

19. Richmond upon Thames College investigated the needs of the oil, gas and petrochemical plant design and construction industry, using a seconded industrialist with status in and knowledge of the industry. A short questionnaire was used, preceded by telephone contact. In addition, many companies were visited. Presentations were also made to various contractors' association meetings, including the Oil and Chemical Plant Contractors Association, the Energy Industry Council and the Capital Projects Clients' Group.

20. A problem common to market research is establishing contact with the 'right' person in the company. The Institute of Personnel Management carried out a project for the DES/PICKUP programme (*A Partnership in Learning*, 1986) which sought to identify ways in which employers and local colleges worked effectively together on initiatives aimed at satisfying adult employee training needs. In most cases, it was found that the training initiatives were negotiated on behalf of employers by personnel or training staff, usually at management level, but frequently the basic influence for an initiative lay elsewhere within a company. Table 2 indicates the origin of such initiatives.

Table 2 Company training initiators

	%
Training managers/officers	41
Top management	26
Line management below top	23
Personnel managers/officers	20
Specialists, e.g. legal	5
College advice	2
Consultants	2
Not recorded	8

21. In some cases the origins of a training initiative may come from a few large companies. In the case of Stevenage College, three large companies had identified a critical shortage of technicians with skills in microwave technology. Until then the work had been confined to graduates, but they realised that much of it could be done by technicians. Discussions between the college and companies led to the design of two course units which were validated and approved by BTEC as options within the college HNC/HND programme. In addition, short courses on microwave technology were provided. The purchase of equipment was funded equally by the companies, DTI and the LEA. The college sees such developments as evidence of the success of its policy of regular, informal contacts with companies, co-ordinated by the marketing officer.

| *The techniques used for market research depend on your type of market. There is no one technique appropriate for all circumstances.*

IDENTIFICATION OF TRAINING NEEDS

22. The North West Food Technology Consortium, centred at Salford College of Technology, consists of 20 companies and four colleges and undertakes training for the food processing industry. Established links are used to identify companies. Market research is carried out using questionnaires. Staff are trained in the techniques of training needs identification and carry out training needs analyses within companies. In large companies, staff mainly work with the company training officers to identify problems to which training might be a solution. Company staff are then interviewed and specialists brought in to develop the appropriate training. Staff initially worked within companies for three to four weeks. In the case of medium-sized companies, often without a training officer, staff undertake the full training audit, interviewing a wide range of staff from management to shop-floor workers. The problems are identified and training proposals developed using, where appropriate, consultants in specialist training areas. With small companies, a brief questionnaire and short visit are used, the difficulty being carrying out detailed work cost effectively.

23. A FEU/PICKUP project in Bristol Polytechnic which sought to identify the *Management Training Needs in Building Societies* (1986) adopted the following methodology:

- A plan for analysing training needs was formulated and agreed with the building society training manager.
- The plan was presented to and discussed with groups of departmental managers and section leaders.
- Individual interviews were carried out with key managers and section leaders, with the aim of providing an understanding of the principal activities of the society and an opportunity for an initial discussion of training issues.
- The next stage was to be a series of 'vertical slice' workshops in which senior, middle and junior managers within a department would discuss training activities that could contribute to improved effectiveness in the work of the department. This stage was not implemented because individual interviews had shown that most managers found it difficult to see how training could relate to their work and that of their departments.

- An individual training needs analysis questionnaire was sent to all head office section leaders and managers up to senior management level, and to a one-in-five sample of branch managers. The main survey had been preceded by a pilot.
- A second questionnaire was sent to personnel/training departments of 20 building societies, asking for their views on management training.
- A follow-up questionnaire was sent to the same societies, asking for details concerning the organisation of training activities and the methods used.
- An identification of training priorities was made with the training manager.

24. A number of colleges, e. g. East Warwickshire College, have used the DACUM process to identify skills required by trainees. DACUM is a technique for designing a curriculum, evolved in Canada and the USA. The duties and tasks contained in given occupational roles are identified by bringing together a group of skilled workers and supervisors for a workshop session, to brainstorm the duties and tasks performed. The tasks are then grouped in major competency areas and a chart produced to display the tasks against the main duty areas. Trainees are interviewed to determine whether they have the competences required for the tasks listed using DACUM; any identified gaps become the requirements for training programmes. East Warwickshire College has used this method to find out what tasks a junior secretary performs and so evolve training programmes.

Identifying the competences required by trainees is not an easy task: trained staff are required.

Bartlett, J. B., *Management Training Needs in Building Societies*, FEU/PICKUP, 1986.

A short report describing the methods used and results obtained in an investigation of the needs of managers in building societies. The report includes the questionnaire and interview schedule used and is a very useful example of such techniques of investigation.

Boydell, T. H., *A Guide to the Identification of Training Needs*, British Association for Commercial and Industrial Education (BACIE), 1971.

A clear discussion of the possible forms of training needs, both present and future, and the processes that can be used to identify them. There is a useful appendix on data collection methods, giving the strengths and weaknesses of each.

Boydell, T. H., *A Guide to Job Analysis*, British Association for Commercial and Industrial Education (BACIE), 1973.

A clear discussion of job description and specification in terms of the skills and knowledge required.

Bramley, P., *Evaluation of Training*, British Association for Commercial and Industrial Education (BACIE), 1986.

A practical guide to the evaluation of training, including a discussion of the techniques that can be used to measure changes in knowledge and skills, and changes in attitudes and interpersonal skills.

Briggs, M. and Mosely, P. A., *Increasing College Responsiveness*, Longman for FEU, 1986.

Describes how a college set about identifying, in a precise and fully comprehensive way, the changing training requirements of local organisations which resulted from the introduction of new technologies. It includes details of an interview schedule and a postal questionnaire.

Channon, A., *Marketing Skills for Craftspeople*, FEU/PICKUP, 1987.

A description of an investigation into the needs of those involved in small craft businesses in the South West. Postal questionnaires, semi-structured interviews and a workshop were used, full details being given.

Cooke, J. G., *Updating the Field*, FEU/PICKUP, 1987.

A description of an investigation into the needs of farmers, growers and related occupations, for technical updating.

Crane, J. D., and Moorhouse, J. C., *Updating Catering and Tourism in Rural Areas*, FEU/PICKUP, 1988.

A description of an investigation into the needs of small businesses involved in catering and tourism in rural areas.

Davies, P. and Scribbins, K., *Marketing Further and Higher Education*, Longman for FEU and FESC, 1985.

A general source of guidance on marketing concepts and techniques relevant to further and higher education. Chapter 2 is particularly relevant to this report, dealing with 'Researching the market'.

Distributive Industry Training Board, *Investigating Business Training Needs* (Available from BACIE).

A clear discussion on defining business training needs, their investigation and the results analysis.

FEU/PICKUP Staff Development Programme Longman for FEU, 1986. *Module 1 Relations with Clients.*

This consists of four units:

Unit 1: The Context of Training,
Unit 2: Market Research for PICKUP,
Unit 3: The Identification of Training Needs,
Unit 4: Client Liaison Skills.

Units 2 and 3 are particularly relevant to this report. Unit 2 discusses primary and secondary market research, marketing audits and public relations. Unit 3 discusses the methods of identifying training needs in companies. References to further sources are given at the end of each unit.

FEU/REPLAN, *Training for the Self-Catering Industry*, FEU, 1988.

A description of a project carried out by Evesham College to investigate the basic training requirements of unemployed adults wishing to work in the self-catering industry and develop relevant curricula.

Geldhart, D. and Brown, A. S., *A Largely Unsatisfied Need: Continuing Professional Development for Process and Process Plant Industries*, FEU/PICKUP, 1987.

A summary report outlining the methods used and results obtained from an investigation of process and process plant company needs.

Goldstein, I. L., *Training in Organisations: Needs Assessment, Development and Evaluation*, Brooks/Cole Publishing Co., 1974.

This book has three parts:

Part 1 Needs assessment and learning environment,
Part 2 Evaluation,
Part 3 Instructional approaches.

(Chapter 2: 'A systematic approach to training' and Chapter 3: 'The needs assessment phase', both in Part 1, are particularly relevant to this report).

Hayes, M. and Hayton, G. (Eds), *Training Needs Analysis*, 1988. Adelaide: TAFE National Centre for R&D; Canberra: Australian Government Publishing Service.

This publication surveys the various methods of training needs analysis (TNA) and describes an approach to selecting the most appropriate techniques for each problem. It also outlines a comprehensive procedure for TNA.

Institute of Personnel Management, *A Partnership in Learning*, DES/ PICKUP, 1986.

This report describes ways in which employers and local colleges have been found to be effectively working together on initiatives aimed at satisfying adult employee training needs.

Kenney, J. and Reid, M. A., *Training Interventions*, Institute of Personnel Management, 1986.

Chapter 3, 'Assessing organisational training needs', and Chapter 6, 'Assessing training needs - the job and the individual', are particularly relevant to this report.

Oppenheim, A. N., *Questionnaire Design and Attitude Measurement*, Heinemann, 1978.

This is a comprehensive discussion of the problems of designing surveys and questionnaires, the various forms questions can take, and the analysis of questionnaire data.

Parkes, D. (Ed.), *Managing a Changing FE*, Longman for FEU, 1988.

A series of contributions about colleges and their authorities, where the organisation and structures have changed as a result of shifts in objectives.

Theodossin, E., *In Search of the Responsive College*, The Further Education Staff College, 1986.

A discussion of what constitutes a responsive college, based on interviews with college principals, industrialists, trade union members, DES officers, FEU officers, members of validating and examining bodies, members of local authorities and Members of Parliament.

Westwood, N. and Aulton, M., *Continuing Education for Pharmaceutical Technologists*, FEU/PICKUP, 1987.

A summary of the techniques used and the results obtained in an investigation into the needs of technologists in the pharmaceutical industry.

A **competence**, in the context of this report, is the performance capability needed by workers in an occupation area (FEU/ PICKUP Staff Development Programme, Module 1). There is, however, a wider definition which subsumes the above vocational competence definition, i.e. the possession of sufficient skills, knowledge, appropriate attitudes and experience for successful performance in life roles (*Towards a Competence-Based System* FEU, 1984).

DACUM (Design A Curriculum) is a group technique used to identify the duties and tasks contained in given occupational roles.

Marketing, in the context of this and other FEU reports, is taken to include not only the activities associated with selling but also the research needed to identify the market requirements.

A **marketing audit** is the means by which an assessment of the current situation or market position is carried out.

Market research is the systematic gathering, recording and analysis of data about problems relating to the marketing of goods and services (FEU PICKUP Staff Development Programme, Module 1).

Primary market research utilises field research involving first-hand and first-time information gathering (FEU PICKUP Staff Development Programme, Module 1).

Secondary market research involves drawing upon information and data already collected and available (FEU PICKUP Staff Development Programme, Module 1).

A **training audit** is the means by which an assessment of the knowledge, attitudes or skills of employees in a particular facet of their work is carried out.

Training need is the gap between knowledge, skills and attitudes required in a job, and the knowledge, skills and attitudes of the person carrying out the job (Jinks, M., *Training*, Blandford Press, 1979)

Training needs analysis (TNA) is an evaluation of present and expected situations from which training needs can be identified and specified as a means of improving standards of performance or influencing desirable change (Engineering Industry Training Board, 1986).

APPENDIX A: THE WILLESDEN COLLEGE OF TECHNOLOGY LCP

A brief outline was given in paragraph 18 of the Willesden College of Technology project to identify the training needs of local companies in computer-based technology. The main steps in their investigation are set out below in greater detail:

1. A company register was set up, using information from:
   - an earlier survey of 40 local engineering companies undertaken by the college;
   - college data on past and present students and their companies;
   - a list of member companies of the West Greater London Productivity Association;
   - a list of companies provided by the planning department of the London Borough of Brent;
   - Willesden, Kilburn and Wembley Jobcentres;
   - the local Careers Office;
   - Brent Chamber of Commerce;
   - the college industrial liaison officer;
   - the Park Royal Enterprise Trust;
   - *Yellow Pages*;
   - *Kompass Directory*.
2. A questionnaire was devised with the aid of advice from:
   - the North East of England Employers Association;
   - the Engineering Industry Training Board;
   - Garnett College;
   - a number of colleges and organisations that had undertaken large-scale LCPs involving questionnaires.

   Since the questionnaires were to be analysed by computer, more specific information was sought on coding and analysis. In addition, staff attended a one-day workshop at the University of Warwick on the 'Identification of Training Needs' and another on 'Survey Design, Implementation and Validation'.
3. From the compiled company directory, 622 companies were identified and approached. The procedure adopted was:
   - A company was telephoned to establish the name of a suitable contact at senior management level and the suitability of the company for the project.
   - A letter was then sent, outlining the purpose of the project and requesting an interview.
   - The letter was followed up, within three to four days of posting, with a further telephone call to arrange an interview.
   - If an interview was not arranged, follow-up telephone calls or further letters were used, as necessary, until an interview was arranged or it became clear that the company did not wish to participate in the project.

4. Of the 622 companies approached, 163 were visited and 148 completed questionnaires. Of the companies initially contacted, 78 had moved from the area and 381 did not wish to take part in the project.

5. Before visiting the companies, the staff concerned participated in an in-college seminar on interview techniques.

APPENDIX B: THE PROJECT WORKING PARTY

John Bolton	Blackburn College
Paul Channell	Wakefield District College
Barry Dobson	Stevenage College
Brian Garrod	Richmond upon Thames College
Ray Hill	Walsall College of Technology
Trevor Leach	formerly Willesden College of Technology
Doreen Rowley	East Warwickshire College of Further Education
John Shore	Salford College of Further Education
Reza Ziarati	Southampton Institute of Higher Education
Albert Clyde	Further Education Unit
Julia Coleman	Further Education Unit
Don Jarvis	PICKUP RDA - South East (until September 1988)
Chris Moorcroft	PICKUP RDA - South East (from September 1988)
Paul Tranter	PICKUP RDA - Midlands (until August 1988)
Bill Bolton	Consultant to Further Education Unit

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Mrs J Hall, National Curriculum Council
Mr J Howgego, Scottish Education Department
Mr R L James HMI, Welsh Office Education Department
Professor P Thompson, National Council for Vocational Qualifications

Secretary

Geoff Stanton, Chief Officer, Further Education Unit

Objectives

The objects for which the **Further Education Unit (FEU)** is established are to promote, encourage and develop the efficient provision of further education in the United Kingdom and for that purpose:

a) to review and evaluate the range of existing further education curricula and programmes and to identify overlap, duplication, deficiencies and inconsistencies therein;
b) to determine priorities for action to improve the provision of further education and to make recommendations as to how such improvement can be effected;
c) to carry out studies in further education and to support investigations of and experimentation in, and the development of, further education curricula and to contribute to and assist in the evaluation of initiatives in further education;
d) to disseminate and publish information, and to assist in the dissemination and publication of information, about recommendations for and experiments and developments in further education.

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